city of edmonds
development information

#B73
New Single Family Residential Permit Submittal Requirements

CODES: International Building & Residential Codes (Current Edition)
International Mechanical Code (Current Edition)
Uniform Plumbing Code (Current Edition)
Washington State Energy Code (WSEC) (Current Edition)

FEE: Based on square footage

SUBMITTAL REQUIREMENTS:

1. A Critical Areas Determination, issued by the Planning Division
2. Permit Application ***Form A***
3. Subdivision or Plat Requirements shall be addressed in the submittal
4. Soils Investigation or Soils Report –Three (3)* copies
5. Stormwater Management Plan - Three (3)* copies with worksheet or required calculations
6. Grading Plan - Three (3)*copies with yardage calculations
7. Plot Plan - Three (3)* copies, scaled 1"=20'
8. Working Drawings - Three (3)* complete sets with the following:
    a) General Notes
    b) Foundation Plan and Details
    c) Construction and Section Details
    d) Floor Plans
    e) Elevation Views
    f) Height Calculations
    g) Structural Calculations

***NOTES:**

- If review by city consultant is required, one additional set of plans/documents is required for each consultant (Three copies required). Verify with permit coordinator if consultant review is required for your project.
- Handouts may be found on the City's website www.edmondswa.gov, or can be obtained at City Hall during normal business hours.
- Plans/calculations/reports prepared by state licensed architects or professional engineers must be stamped and signed by the design professional.

PERMIT SUBMITTAL REQUIREMENTS

1. CRITICAL AREAS CHECKLIST *(See Handout #P20)*

A Critical Areas Determination, issued by the Planning Division, must be completed and on file with the City. Provide applicable information as indicated by the decision.

2. SUBDIVISION OR SHORT PLAT REQUIREMENTS

When applicable, provide all information and/or details as required by the recorded plat or subdivision. For example: a tree retention and/or landscaping plan, driveway turnaround, existing and proposed utility and access easements, street dedications, sidewalk improvements, etc.

3. SOILS INVESTIGATION AND/OR REPORT (3 copies)*

The International Residential Code (IRC) requires the classification of soil and design bearing capacity to be determined and called out on the plans. This classification is based on observation and tests of the soil materials disclosed by borings or excavations on the building site. Soils reports by a geotechnical engineer are required when soils at the site are not adaptable to conventional spread footings, when overall site slopes exceed 15%, or when required by the Building Official. The recommendations within the report shall be incorporated into the foundation design and shall conform to the requirements of International Residential Code Chapter R403. Additional testing may be required if you are proposing to use Low Impact Development (LID) techniques and/or infiltration to meet stormwater management requirements. See Handout #E72 for more information. Lots located in the designated Earth Subsidence and Landslide Hazard Area are subject to additional development requirements of ECDC Chapter 19.10.

When soils reports are required, they shall include the following:

1. A plot plan showing the location of test borings and/or excavations.
2. A complete record of the soil samples.
3. A record of the soils profile.
4. Elevation of the water table, if encountered.
5. Recommendations for foundation type and design criteria, including but not limited to: bearing capacity of natural or compacted soil; provisions to mitigate the effects of expansive soils; mitigation of the effects of liquefaction, differential settlement and carrying soil strength, the effects of adjacent loads, and foundation drainage.
6. Expected total and differential settlement.
7. Pile and pier foundation information in accordance with IBC Section 1808.2.2.
8. Special design and construction provisions for footings or foundations founded on expansive soils, as necessary.
9. Compacted fill material properties and testing in accordance with IBC Section 1803.5.

NOTE: Report recommendations shall be incorporated into the foundation design

4. STORMWATER PLAN *(See Handout #E72)*

A completed Stormwater Classification Worksheet (see handout #E72) shall be submitted with all storm system plans. If you are proposing Low Impact Development (LID) and/or an infiltration system to meet stormwater management requirements, see Low Impact Development handout #E72-LID for requirements including approved soil testing methods and standard details. Stormwater Handouts, ECDC Chapter 18.30 and the Stormwater Supplement are available for reference in our Development Services Department as well as on the City's website (www.edmondswa.gov) under Services/Permit Assistance/Handouts.

5. GRADING PLAN (See Handout #B37)

Submit three (3) copies of a grading plan, scaled 1"=20'. Show existing grade contours and proposed finished grades at two (2) foot intervals. Indicate lowest footing and finished floor elevations. Detail permanent slope protection, the slope of the lot, provide a driveway slope profile and methods for temporary and permanent erosion control. Contact City Engineering Division for BMP's, (See Handout #E72)

6. PLOT PLAN

It is the applicant's responsibility to submit a true and accurate plot plan to the City for review. Submit three (3)* copies, scaled 1"=20', one (1)* of the three plot plans must be no larger than 8½" x 14", containing the following information:

- ☐ Property owner's name, tax account parcel number and street address.
- ☐ North arrow designation and property line dimensions.
- ☐ Streets, approaches, driveways, sidewalks, alleys, easements (public and private), paved areas, street dedications and adjacent City right-of-way (developed or undeveloped), show all dimensions.
- ☐ Sewer manhole location, sewer stub location, proposed sewer lines and cleanouts, water meter location, water service line, gas, cable and phone lines, fire hydrants, telephone poles, utility transformers, etc.
- ☐ Existing critical areas including physical features and water courses of any size (i.e., streams, creeks, ponds, ditches, etc.). Show any proposed critical area buffers and setbacks.
- ☐ Dimension all buildings and structures (label them existing or proposed), indicate setback distances, lot area and structural lot coverage (buildings to be demolished or moved require a separate permit). Structural lot coverage includes the total ground coverage of all buildings or structures on a site measured from the outside of external walls or supporting members or from a point 2.5 feet in from the outside edge of a cantilevered roof, whichever covers the greatest area. Provide a square footage for each structure as well as coverage as a percentage of total lot area.
- ☐ Accessory structures and projections, decks, porches, hot tubs, pools, cantilevered structures, bay windows, chimneys, roof overhangs, eave lines, breezeways, patios, sheds, pool mechanical rooms, fences, etc.
- ☐ Retaining wall location with typical section detail. *(See Handout #B62)*
- ☐ Rockery location. Rockeries and retaining walls may be no taller than three (3) feet above original grade and be located within a required setback area.
- ☐ Datum point and building height calculations. *(See page 5, F)*
- ☐ Elevation grades at the property corners. Topographic grades to be shown at two (2) foot intervals across the lot. Indicate lot slope and driveway slope. (See Handout #B37)
- ☐ Existing impervious area calculations (Pre and Post July 1977) and new proposed impervious surface calculation. (See Handout #E72)
- ☐ Designated flood plain sites must provide basement, first floor elevations and the lowest proposed elevation of the footing, foundation wall, and finished floor stamped by a licensed land surveyor, based on base flood elevation. See IBC Appendix G for additional Flood-Resistant Construction provisions.
- ☐ Type and diameter-at-breast-height of existing trees, labeled 'to be retained' and 'to be removed', with description of how retained trees will be protected. (See Handout #P46)

7. WORKING DRAWINGS Two (2)* complete sets with the following:

A. GENERAL NOTES: General notes shall include the following:

1) Name, address, phone number of owner and project contact person.
2) Legal description, tax account parcel number, copies of recorded access or utility easements.
3) Zoning, lot square footage, building pad area, and structural lot coverage.
4) Design loads: dead, live, wind (wind speed 85 mph; wind exposure B or C, see R301.2.1.4), ground

snow load 25 psf, lateral, seismic (Seismic Design Category D2).

5) Climate and Geographic Design Criteria per IRC Table 301.2(1). *(See Attachment B1)*
6) Soil classification, concrete strength, reinforcement steel grades.
7) Specify timber species and lumber grades, plywood span indexes for roof, wall, floor sheathing.
8) Nailing schedules for floor, wall, roof sheathing per IBC Table 2304.9.1 and IRC Table R602.3(1).
9) Type of heating system, fuel type, glazing to floor area percentage, energy compliance option.

B. FOUNDATION PLAN: *(See Attachments B & C)*

A site specific foundation plan is required and shall be designed based on the soil classification determined on site. Show the following details:

1) Slab, footing and wall dimensions, thickness and height; grade of reinforcing steel, spacing and size of vertical and horizontal rebar and anchor bolts, indicate stepped footing elevations.
2) Location and size of foundation vents and crawlspace access opening.
3) Isolated footings with reinforcement and connectors. *(See Attachment H)*
4) Location of hold-downs or other metal connectors per IBC Chapter 18 or IRC Chapter 4. *(See Attachment H)*
5) Positive drainage method for all crawl space areas.
6) For slabs: provide insulation, thermal break, aggregate and vapor barrier details.
7) Foundation drainage detail. Footing drains are required around all concrete and masonry foundations that retain earth and enclose habitable or useable spaces located below grade, and for crawlspaces when a minimum 6" slope within the first 10' of the foundation wall is not achieved, or when a Geotechnical Engineer calls out footing drain requirements in a report. Show the proposed discharge location of the footing drains. (*See Attachment C1 for footing drain requirements-when a Geotechnical report is provided, the foundation drainage recommendations in the report shall govern*).

NOTE: Footings and foundations shall be constructed of masonry and/or concrete, unless an alternate design is approved by the City. In all cases, the footing must extend below the frost line (18" minimum). Refer to IRC Table R403.1 below for minimum footing and wall sizes. Bearing walls shall be of sufficient size to support all imposed loads; walls greater than 4 feet exposed, with unequal backfill, or supporting a surcharge, shall be designed and stamped by a Washington State licensed engineer with design calculations submitted for review.

C. CONSTRUCTION AND SECTION DETAILS: (*See Attachment C*)

NOTE: Timber species, lumber grade and nailing patterns shall be noted near the appropriate detail.

1) Framing cross sections from foundation through roof and plan views (with appropriate cross references) show joist and stud size, spacing, direction, support, connections, blocking, headroom, insulation, foundation and footing drain.
2) Engineered lateral calculations are required when the "conventional construction" wall bracing provisions of IRC R602.10 cannot be met. NOTE: see IRC WAC 602.10.6.1 for alternate braced panel exceptions.
3) Locate and detail all seismic hold-downs, anchor bolts, drag strut locations, post and beam connections, rafter and truss clips; specify manufacturer, model number and size. Clearly indicate exterior and interior shear wall location(s), specify nailing patterns and provide lateral analysis calculations. *(See Attachment H)*
4) Typical bearing wall and roof section view; label all materials, insulation, sheathing, connections, exterior bracing, nailing patterns for roof, wall and floor sheathing, finish materials, roofing and siding.
5) Roof construction, ventilation, drainage and pitch.
6) Provide load calculations for all beams that span greater than 8 feet, specify connectors. Note: positive connection is required at all posts and beams. *(See Attachment H)*
7) For factory engineered trusses note positive connection, bracing and blocking requirements. Manufactured floor and roof trusses are designed for specific conditions and tolerances; the manufacturer prepares a design sheet which specifies the size and grade of the members, the size and

type of connectors to be used and the method of bracing. All rafters or trusses shall be anchored to bearing walls with approved framing anchors. Note: the design sheet shall be submitted to the building inspector at the framing inspection. *(See Attachment G)*

8) Chimney construction, clearance from combustibles, outside air, detail hearth, roof clearance, lateral support and seismic strap connections. Supply manufacturer's listing for factory built units, inserts, flues, woodstoves, etc.
9) Stair, handrail, guards, headroom, landing, deck details. Note; enclosed useable space under interior stairs requires 1/2" gypboard on walls and ceiling. *(See Attachment I)*

D. FLOOR PLAN: (*See Attachments D, D1 & G)*

1) Direction, spacing, size and species of structural beams, joists, rafters and trusses.
2) Dimension, specify use of each room and/or area, indicate the square footage of each floor.
3) Stairway, door and hallway widths, locate hardwired smoke alarms (detectors).
4) Location, access and clearance to crawl and attic spaces, specify opening dimensions.
5) Mechanical and plumbing fixtures/appliances. Show hot water tank relief vent and seismic straps. Show water main shutoff. A pressure reduction valve is required where the lateral pressure exceeds 80 psi. An expansion tank is required at the water heater.
6) Specify size of doors and windows. Provide openable area and sill height of egress windows in all sleeping rooms.
7) Show extent of fire separation between garage and living space and garage attic areas or habitable spaces over garage.
8) Show required lighting for interior and exterior stairways per R303.6.

E. ELEVATION VIEWS: (*See Attachment E*)

1) Front, rear, sides, finished slopes, average grade, finished floor and roof elevations.
2) Roof overhangs, decks, porches, stairways, walkways, breezeways, planters, rockeries, retaining walls, cantilevered structures, chimneys, roof decks, guardrails, handrails, landings, ramps, stairs, siding, roof material, etc.
3) Show location and size of windows, doors, sliders, skylights, etc.
4) Show the proposed height of the residence and the maximum allowed height taken from the average grade as determined by the height calculations. *(Refer to Item F, below, for more information)*

F. HEIGHT CALCULATIONS: (*See Attachments A & E and Handout #B41*)

- ☐ Height rectangle. Stake out the smallest rectangle that encompasses all four corners of the proposed building at original, undisturbed soil grade. Include decks when covered by a roof and projections such as bay windows. Chimneys and eaves are exempt if they project no more than 30 inches. Note, detached structures must have separate height calculations.
- ☐ Select a datum point to establish a starting point to compute height calculations. The datum point must be a permanent point of reference and be located off site (i.e. top of a manhole cover, fire hydrant, or street monument). Reference the datum point at elevation +100 (or the actual surveyed elevation, if available).
- ☐ Calculate the elevation at each corner of the height rectangle relative to the datum point mark of +100 (or actual, if available). Values may be higher or lower than that of the datum point.
- ☐ Add the four corner elevations and average--this figure is the average grade.
- ☐ Add 25 feet to the average grade for a single family residence. This figure is the maximum height allowed at the proposed project location.
- ☐ On the plot plan, show the elevations at each corner of the height rectangle, the datum point grade, as well as the lines of average grade, proposed building height, and maximum allowed height.
- ☐ Height field verification shall be done by the applicant's agent/contractor and 'observed' by the building inspector. The agent/contractor shall set up the equipment; establish the datum point and the point of average grade. These items must be consistent with the approved plan.

NOTE

If the proposed height of a building (as shown on the plans) is within 12 inches of the maximum height permitted for the zone an elevation survey is required. An elevation survey consists of three components, to be conducted by a licensed surveyor:

- Prior to construction the surveyor shall establish average grade as specified in ECDC 21.40.030, and shall establish a reference datum point that will be undisturbed and can be freely accessed.
- The surveyor shall locate the elevation of the first floor prior to the City under-floor inspection.
- A final letter of height confirmation shall be provided upon completion of the structure.

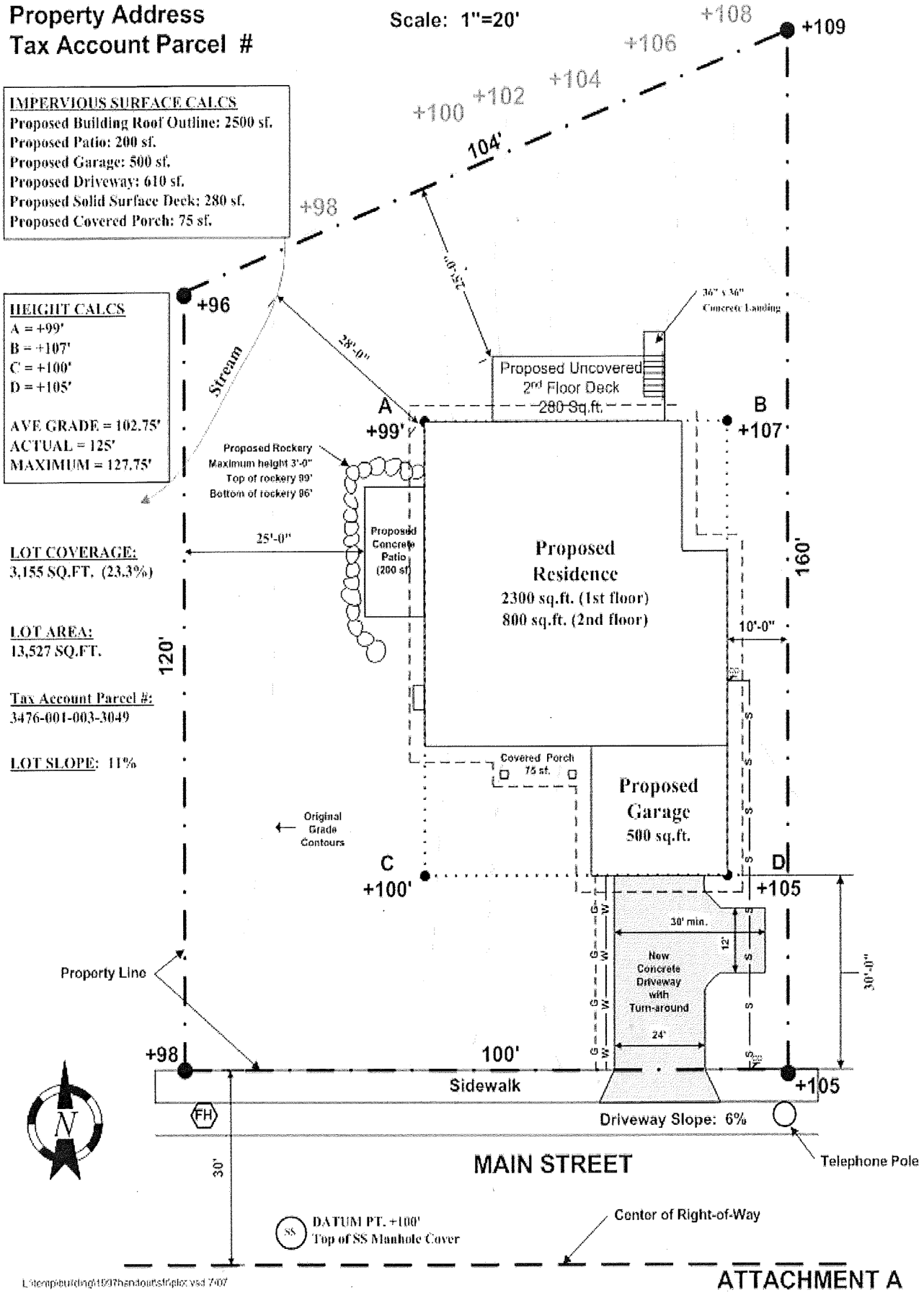
G. STRUCTURAL CALCULATIONS: Two (2)* copies when required.

Plans which do not meet conventional construction as detailed in the International Building or Residential Code, must be designed, stamped and signed in accordance with the structural provisions of the International Building Code by a Washington State licensed Engineer with supporting calculations included in the submittal.

Property Owner Name
Property Address
Tax Account Parcel #

SAMPLE PLOT PLAN

Scale: 1"=20'



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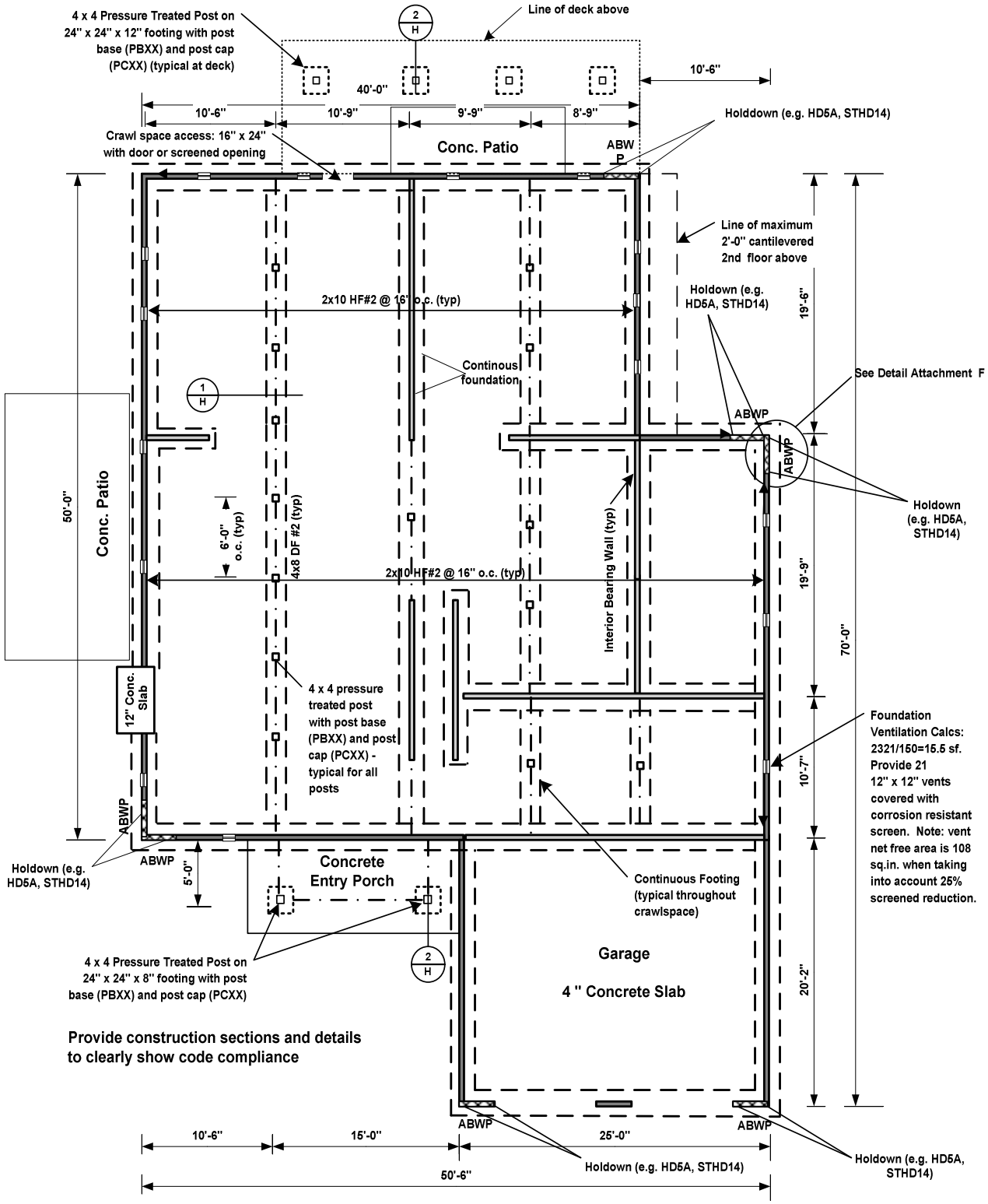
ATTACHMENT A

SAMPLE FOUNDATION PLAN

INCLUDES 1ST FLOOR FRAMING

SCALE 1/4" = 1'-0"



**Provide 6 mil black polyethylene moisture barrier throughout crawlspace, lap seams 12".

**All wood in contact with concrete or exposed to weather must be pressure treated or naturally resistant to decay.

**Footings to bear on 2000 psf. undisturbed soil. Soil Type: Silty Gravel

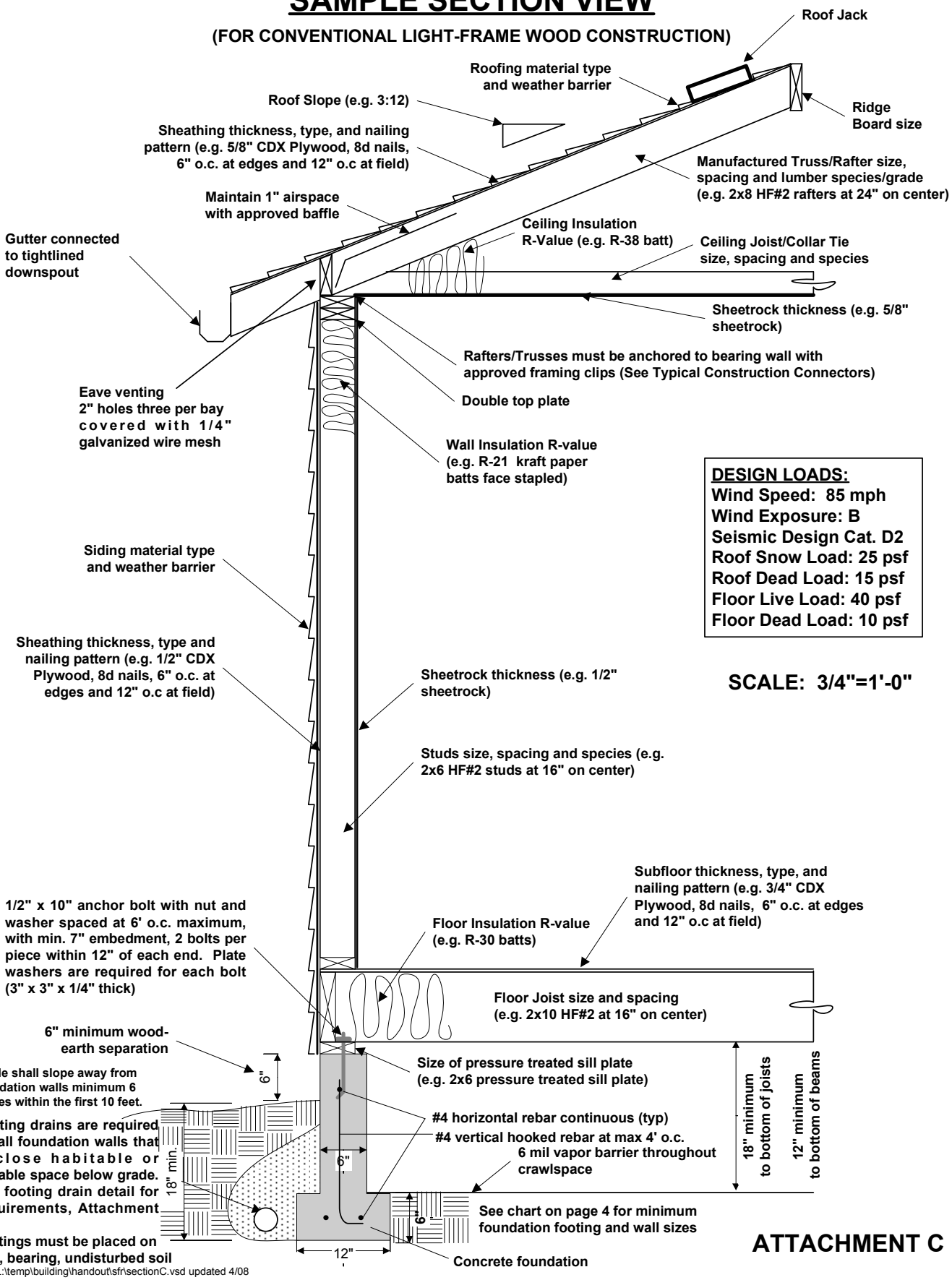
ATTACHMENT B

TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND SPEED[e] (mph)	SEISMIC DESIGN CATEGORY[g]	SUBJECT TO DAMAGE FROM				WATER DESIGN TEMP[f]	ICE SHIELD UNDER-LAYMENT REQUIRED[i]	FLOOD HAZARDS[h]	AIR FREEZING INDEX[j]	MEAN ANNUAL TEMP[k]
			Weathering[a]	Frost line depth[b]	Termite[c]	Decay[d]					
25 psf	85	D2	Moderate	18"	Slight to Moderate	S to M	27° F	No	Firm Maps 11-8-99	0-1,000	50°

SAMPLE SECTION VIEW

(FOR CONVENTIONAL LIGHT-FRAME WOOD CONSTRUCTION)



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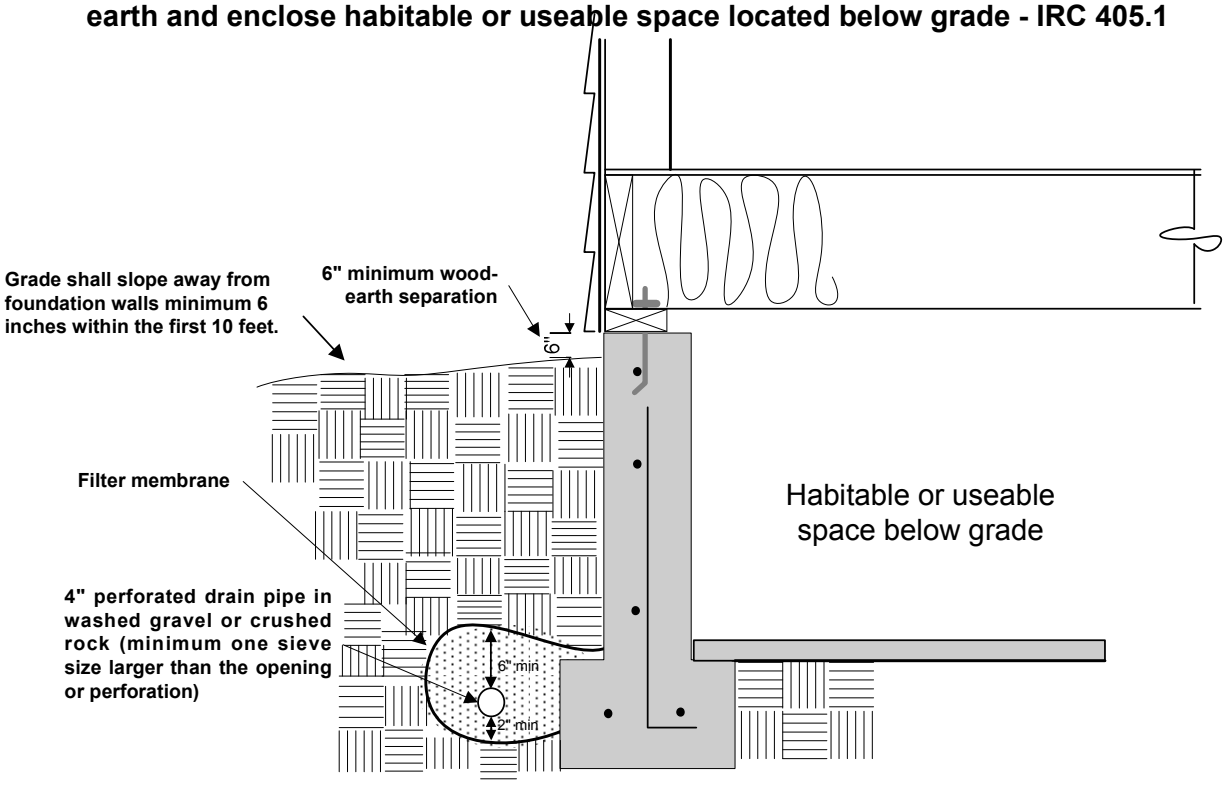
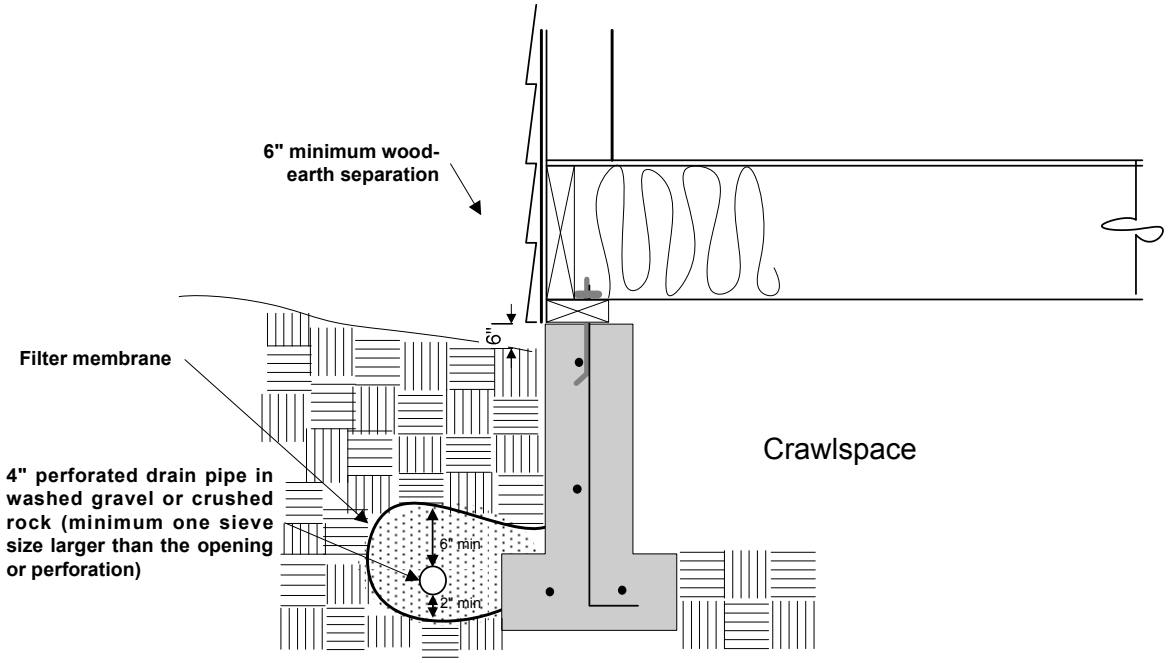
ATTACHMENT C

Foundation Drainage Examples

Footing drains are required for concrete or masonry foundation walls that retain earth and enclose habitable or useable space located below grade - IRC 405.1



Footing drains are required for crawlspaces if topography does not allow for minimum 6 inch slope away from the foundation wall within the first 10 feet - IRC 401.3



ATTACHMENT C1

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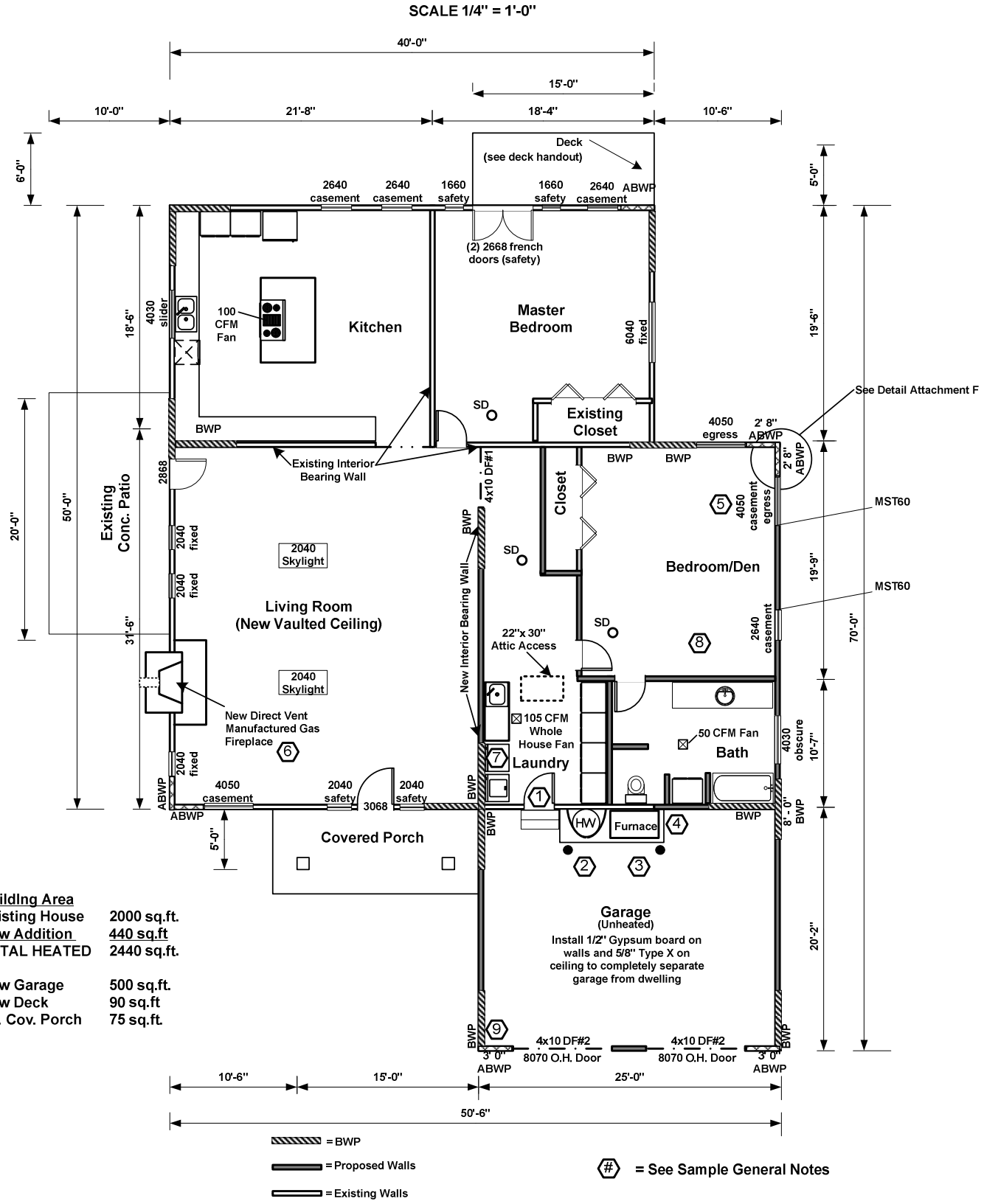
Revised 9/2010

SAMPLE FLOOR PLAN



Building Area

Existing House	2000 sq.ft.
New Addition	440 sq.ft
TOTAL HEATED	2440 sq.ft.
New Garage	500 sq.ft.
New Deck	90 sq.ft
Ex. Cov. Porch	75 sq.ft.

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ATTACHMENT D

Revised 9/2010

SAMPLE GENERAL NOTES FROM FLOOR PLAN REFERENCES

1. **Door between garage and dwelling to be 1- 3/8" solid core or 20 minute door.**

2. **Vent hot water tank relief valve directly to the outside, provide seismic straps within upper 1/3 and lower 1/3 of hot water tank, provide expansion tank.**

3. **Install bollard or wheelstop to protect mechanical equipment from vehicle impact.**

4. **Sources of ignition for gas hot water tank and furnace to be located a minimum of 18" above finished floor, or labeled FVIR.**

5. **Provide one openable escape window in basement and in each sleeping room meeting all of the following requirements:**
    1) **An openable area of not less than 5.7 square feet (5.0 @ grade level)**
    2) **A minimum clear height of 24"**
    3) **A minimum clear width of 20"**
    4) **Finished sill height of not more than 44" above the finished floor**

6. **Install direct vent manufactured gas fireplace in accordance with manufacturer's specifications and State codes.**

7. **Dryer to vent directly to the outside with a maximum vent length of 25' and a maximum of two 90 degree elbows.**

8. **Smoke detectors to be hard wired, interconnected, with battery backup and installed in the following locations:**
    1) **In each sleeping room.**
    2) **Immediately outside sleeping rooms.**
    3) **Minimum of one installed on each floor, including the basement.**

9. **Provide pressure reducing valve and main water shut-off on water supply line**

ATTACHMENT D1

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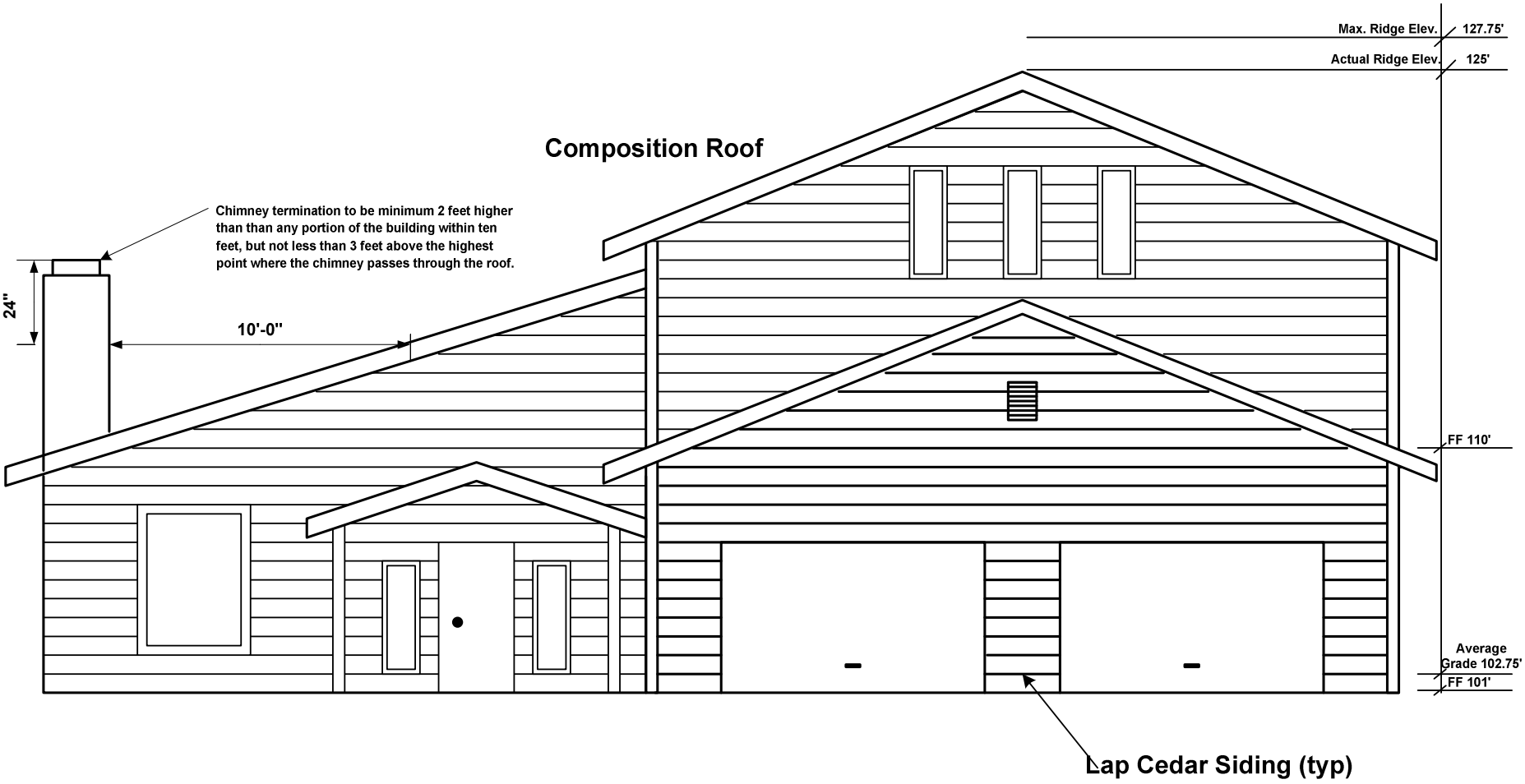
SAMPLE ELEVATION

SCALE 1/4" = 1'-0"



SOUTH ELEVATION

FF = Finished Floor Elevation

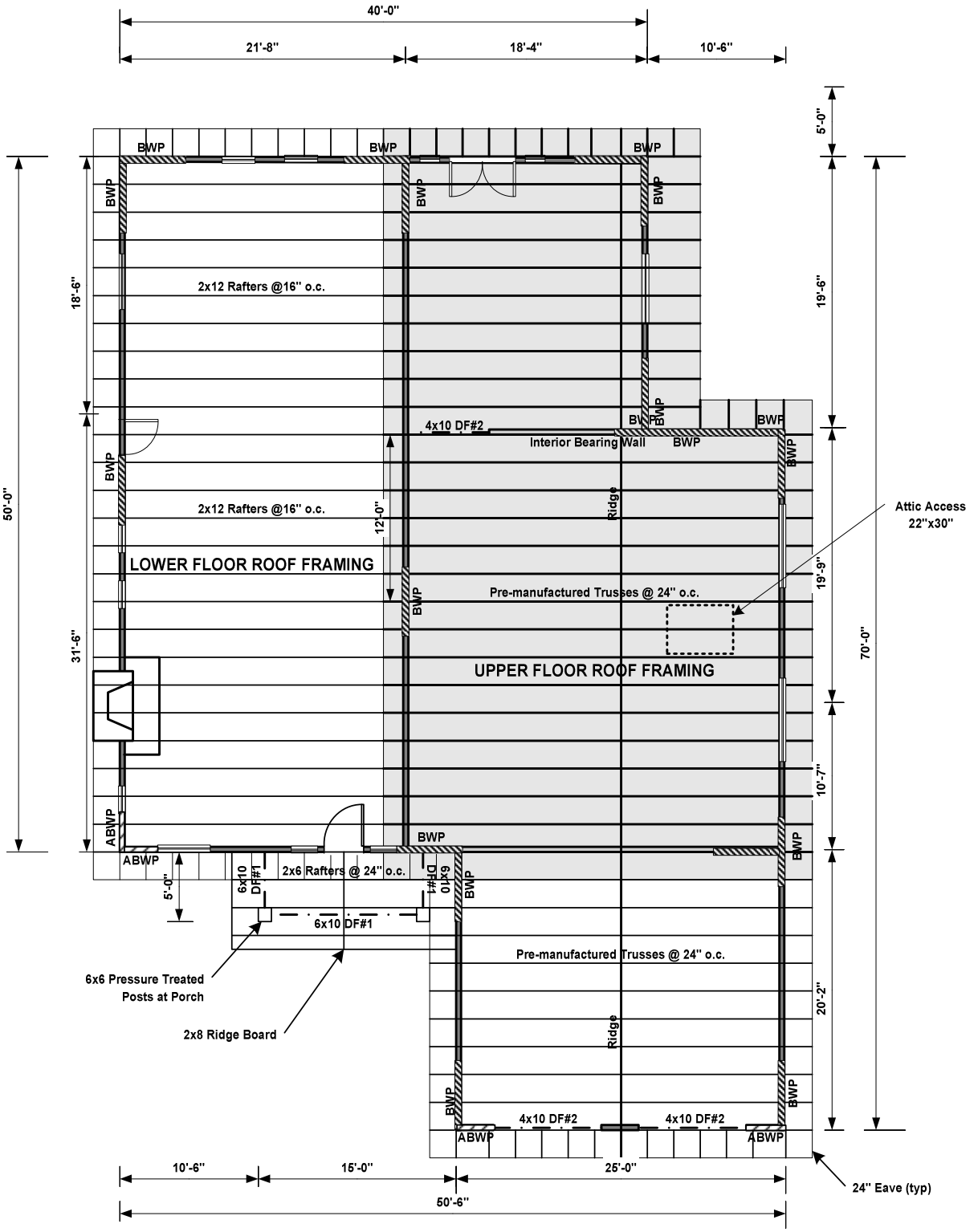
ATTACHMENT E

Revised 9/2010

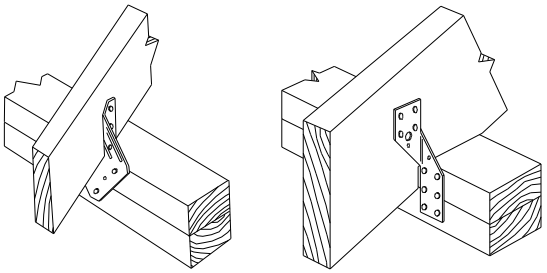
SAMPLE ROOF FRAMING PLAN

INCLUDES 1ST & 2ND FLOOR ROOF FRAMING

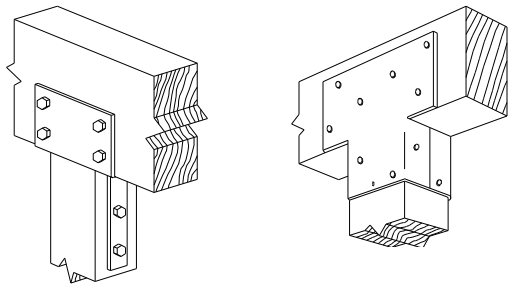
SCALE 1/4" = 1'-0"



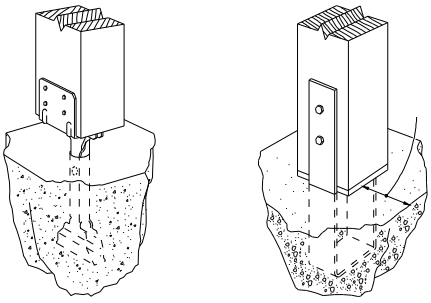
TYPICAL CONSTRUCTION CONNECTORS



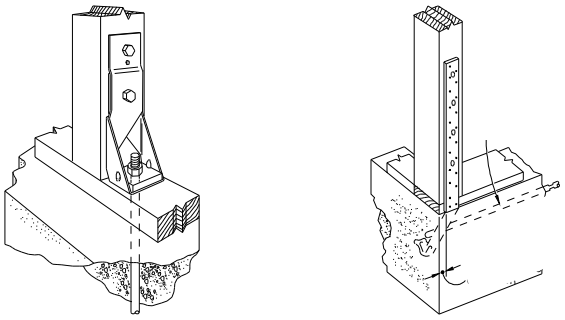
Rafter/Truss Clips



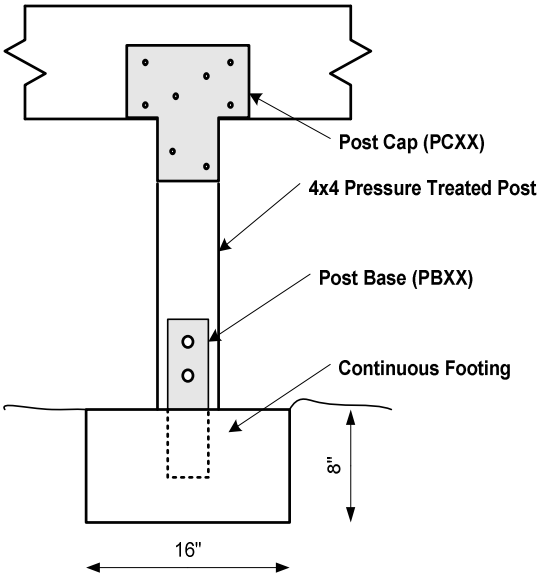
Post-Beam Connectors



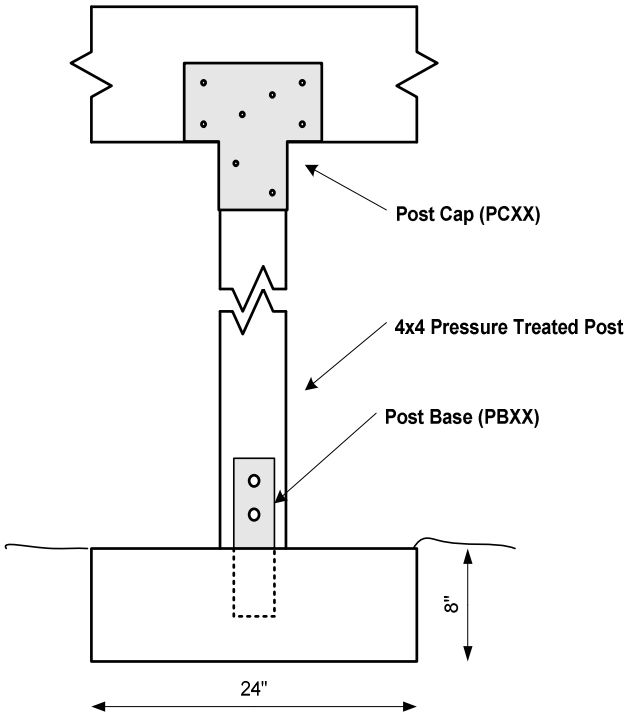
Post-Pier Connectors



Holdowns



Typical Crawlspace Post & Beam

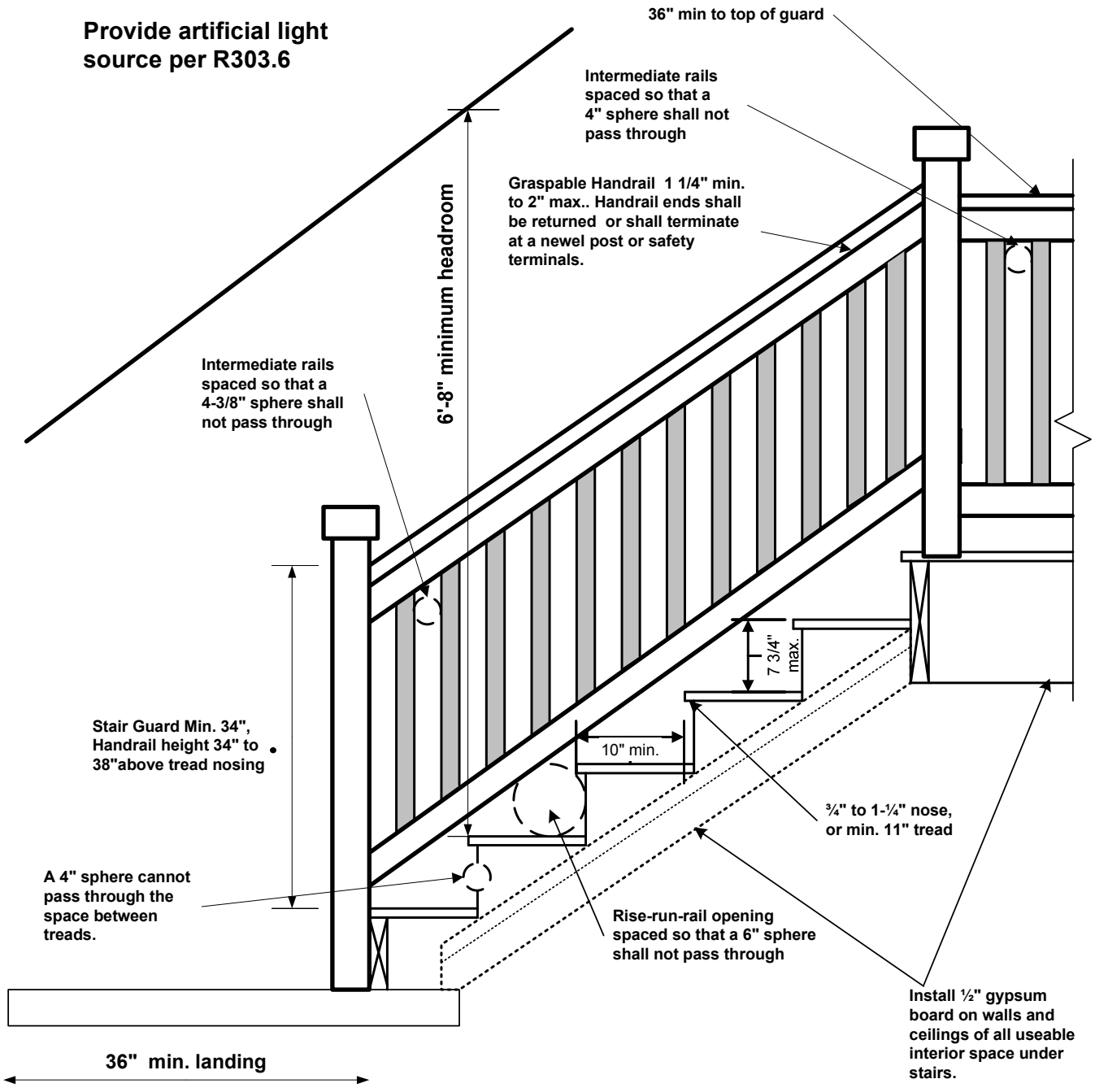


Entry Porch/Deck Post & Beam

ATTACHMENT H

Sample Stair Detail

2006 IRC



Guard and handrail to sustain 200 lb. load

Guard balusters to sustain 50 psf load

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ATTACHMENT I

Revised 9/2010